



TVA Environmental Policy & Framework

Approach, Alignment, & Deliverables

March 13, 2008

Overview

Alignment

Mission:

TVA Act
1933

Strategy:
(including Strategic Intent, Financial Principles, and Board-Level Metrics)

Tennessee Valley Authority

TVA 2007 Strategic Plan

Tennessee Valley Authority

TVA Environmental Policy & Framework

The Environmental Policy & Framework is aligned with the TVA 2007 Strategic Plan and supports the three-part TVA mission, namely, low-cost energy, environmental stewardship, and economic development.

TVA Objectives and Metrics

Winning Performance
FY 05 TVA Balanced Scorecard

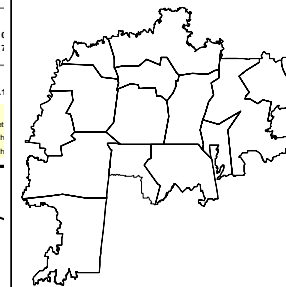
	Weight	Status	December 2004			GOALS		
			Actual FYTD	Plan FYTD	Forecast	Target*	Mid	Stretch
Financial								
• Total O&M Costs (millions of \$)	15%	➔	880	898	3,586	3,584	3,548	3,477
• Financial Strength (millions of \$)	15%	➔	(37)	147	21			
• Productivity (index)**	10%	➔	153.7	147.6	153			
Customer								
• Customer Impact (Percent)	10%	➔	86.7	100.0	100			
• Economic Development (index)	10%	➔	149	100	11			
Operations								
• Asset Availability (Hours)	20%	➔	104	98	11			
• Environmental Impact (index)**	10%	➔	44	59	1			
People								
• Safe Workplace (all injuries/losses avoided)***	10%	➔	1.05	2.12	2.1			

Notes:
* Target equals Performance Plan Target
** Reported quarterly
*** Payout at any performance level is contingent upon no TVA employee fatalities.

Status:
➔ Forecast at or better
➔ Forecast worse than
➔ Forecast worse than

SBU/BU Performance Plans

Fiscal Year 2005 Performance Plans



Customer Service and Marketing
Economic Development
Fossil Power Group
TVA Nuclear
River System Operations & Environment
Transmission/Power Supply Group
Communications and Government Relations
Administration
Human Resources
Finance

Line of Sight



Key Focus Areas

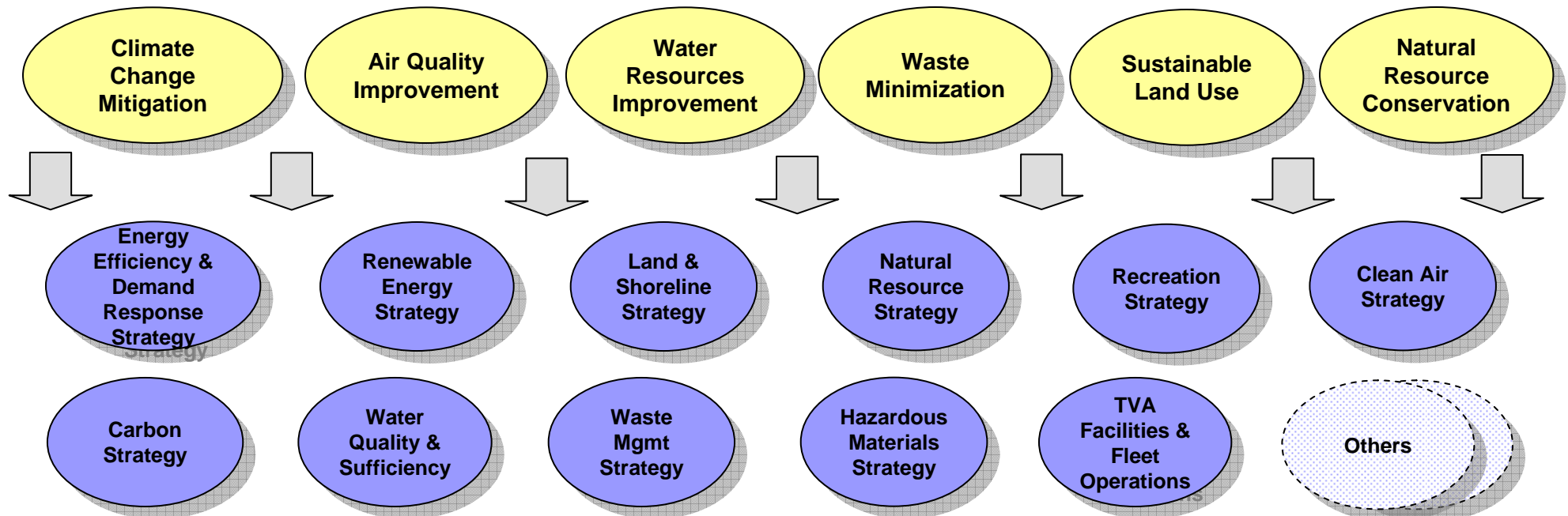
TVA 2007 Strategic Plan

Environmental Strategy Objective Summary:

Support TVA's long-term success by managing environmental risk and impacts, increasing business and public value of environmental management, and enhancing TVA's reputation.

TVA Environmental Policy & Framework

Environmental Dimensions



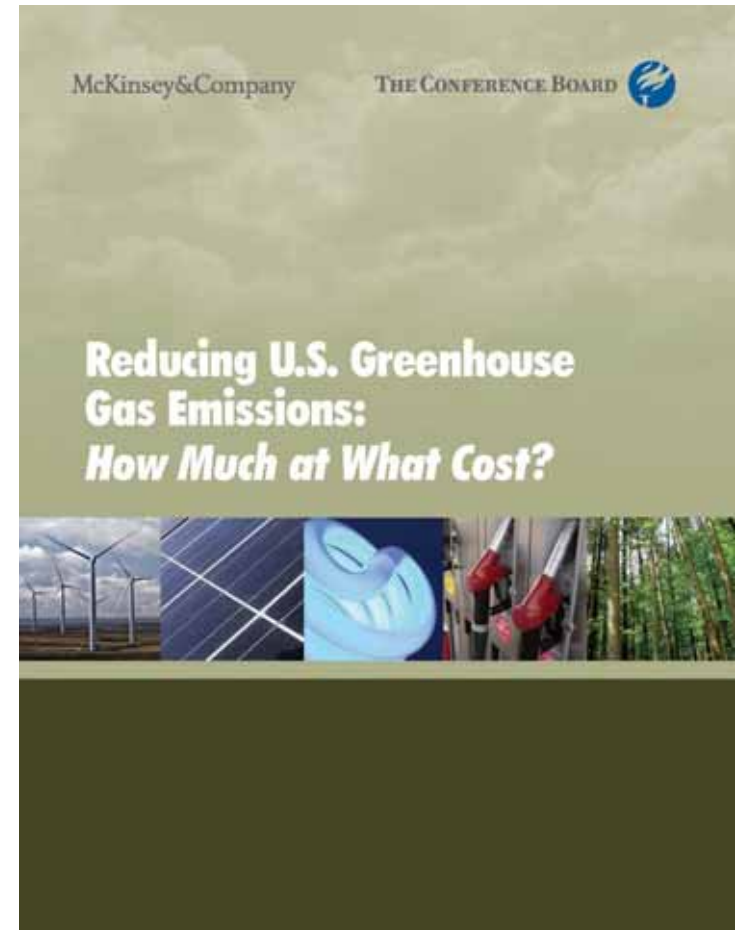
McKinsey – Our Consulting Partner

1 Global reputation as leading consultant to energy companies and others

- ◆ Extensive reach, e.g., 90 locations in 51 countries
- ◆ Provides objective business and management perspective
- ◆ Demonstrated relationships with NGOs, government organizations, leading companies
- ◆ Serves over 70 percent of *Fortune's* Most Admired

2 Demonstrated content knowledge and business expertise in electric power, climate change, renewables, energy efficiency, and risk management

3 Collaborative engagement style with on-site leadership and joint problem-solving approach



Project Objectives & Deliverables

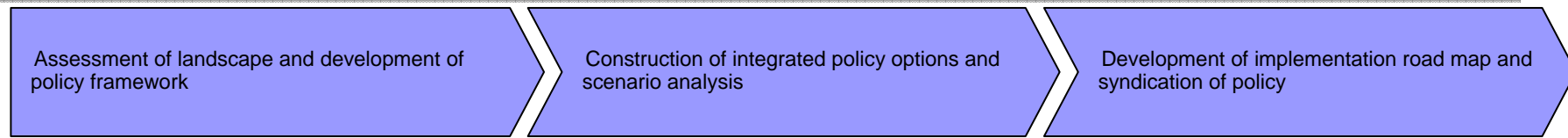
TVA's environmental strategy objective

Support TVA's long-term success by managing environmental risk and impacts, increasing business and public value of environmental management, and enhancing TVA's reputation.

Project deliverables

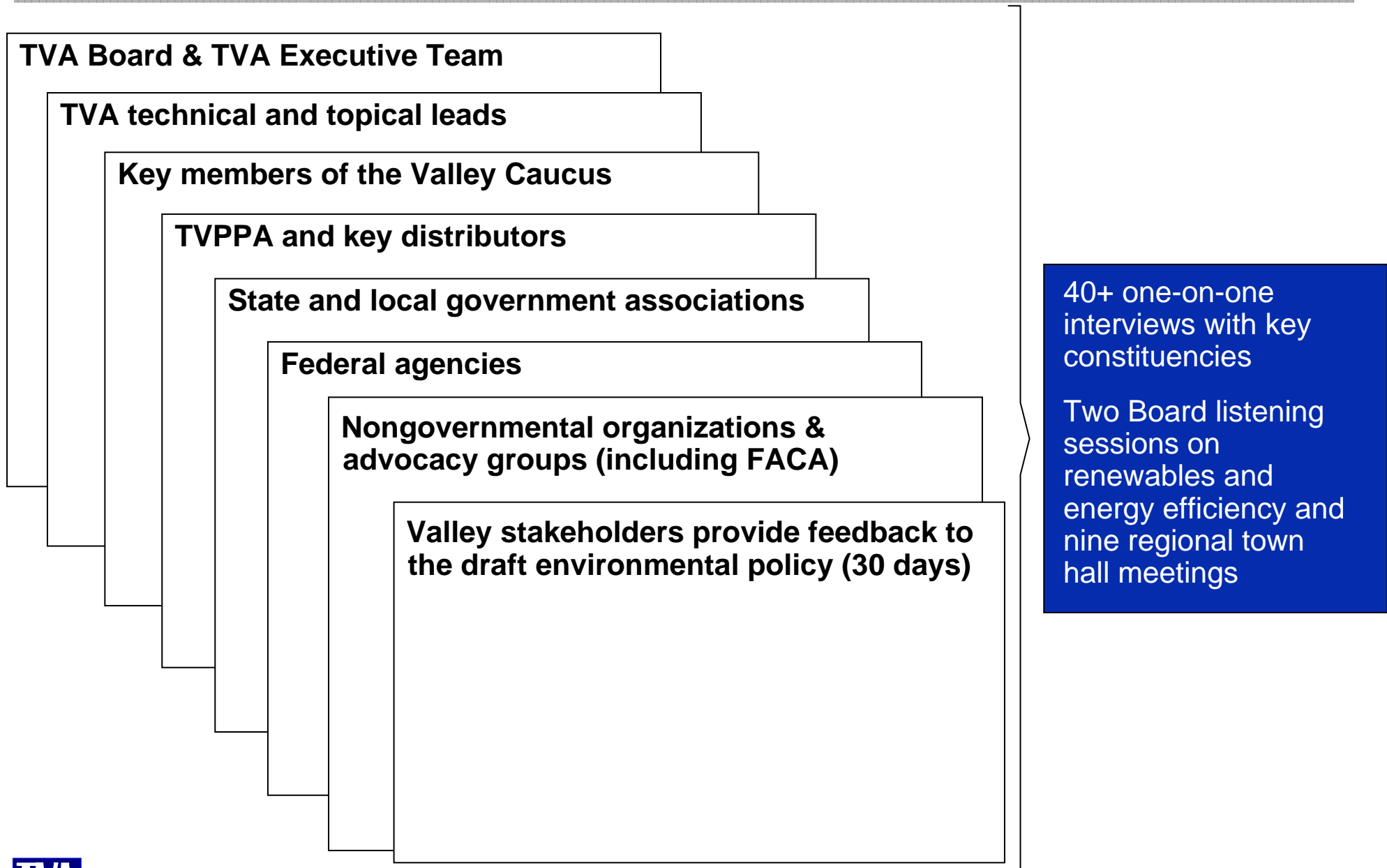
- ◆ White paper (15-20 pages) that will articulate Corporate Environmental Policy integrating multiple focus areas and strategies.
- ◆ Corresponding supporting analyses specifically for areas where additional deep dives are conducted, including, but not limited to, climate change, clean air, renewables, energy efficiency, and areas specific to resource stewardship.
- ◆ Additional supporting analysis will be performed in the areas of:
 - Sustainable Land Use (including natural resource management and recreation)
 - Water Resources

Environmental Policy & Framework – Integrated Work Plan



Timeline	1/22	6 weeks	2/29	7 weeks	4/18	2 weeks	5/2
Key activities		<ul style="list-style-type: none">◆ Internal situational analysis<ul style="list-style-type: none">— Review of existing strategies— Feedback from/to current Business Unit strategies— SWOT analysis along financial, operational metrics◆ External situational analysis<ul style="list-style-type: none">— Assess emerging regulatory and technology developments and scenarios— Competitor analysis◆ Stakeholders outreach and analysis<ul style="list-style-type: none">— Finalize and prioritize the list of stakeholders— Schedule and collect input from key stakeholders◆ Develop the rough draft of environmental policy story line (including external drivers)		<ul style="list-style-type: none">◆ Define the issue-driven requirements, positions, and policies, focusing on financial position, intrinsic value, reputation, and associated risks◆ Establish relationship between policy and issues identified◆ Identify trade-offs among the issue-driven positions to formulate integrated policy options◆ Refine environmental policy story line and develop content for public draft◆ Conduct scenario analysis and identify strategic response		<ul style="list-style-type: none">◆ Finalize environmental policy document and corresponding supporting information◆ Define action plan with resource requirements and key metrics to measure success	
Key meetings		<ul style="list-style-type: none">◆ Internal stakeholder interviews◆ External individual and group interviews◆ TVA Board Meeting, 2/15		<ul style="list-style-type: none">◆ Board listening day on Renewables and Energy Efficiency, 3/4-5◆ Regional Resource Stewardship Council Meeting (RRSC), 3/13, 3/14◆ Environmental policy framework and content workshop with internal stakeholders, 3/19		<ul style="list-style-type: none">◆ TVA Board Meeting, 4/3◆ TVA Board Meeting, 5/19	

Stakeholder Engagement



Alignment with TVA 2007 Strategic Plan Commitments

- A. Partner with distributors and customers to promote conservation and energy efficiency.
- B. Balance TVA's production capabilities and load by adding assets and encouraging the use of energy in ways that reduce the need for new generation.
- C. Strive to be a leader in energy efficiency improvements and peak demand reduction over the next five years through partnerships.
- D. Work with stakeholders at the national, regional, state, and local levels to encourage effective conservation efficiency and peak reduction initiatives.
- E. Manage land and water resources to provide multiple benefits to the Valley.**
- F. Serve as a responsible steward of the Tennessee River system.**
- G. TVA will be proactive in addressing environmental concerns, including those related to global climate change.
- H. Continue to reduce the impacts of TVA's operations on the environment.
- I. Apply science and technological innovation to improve operational performance.
- J. Strive to reduce the carbon intensity of its generation by increasing renewable generating capacity.
- K. Continue to reduce emission levels from its fossil plants to comply with existing and future environmental regulations by using additional controls and more efficient plants.
- L. Limited use of emissions allowances to meet compliance requirements.
- M. TVA will make decisions that give strong consideration to fuel mix and generation assets that are low or zero carbon-emitting resources.
- N. Invest in research and development on low carbon generation options, carbon reduction, and carbon capture and sequestration technologies to ensure that coal remains a viable part of TVA's diverse generation portfolio.



Stewardship Focus

Key Focus Areas

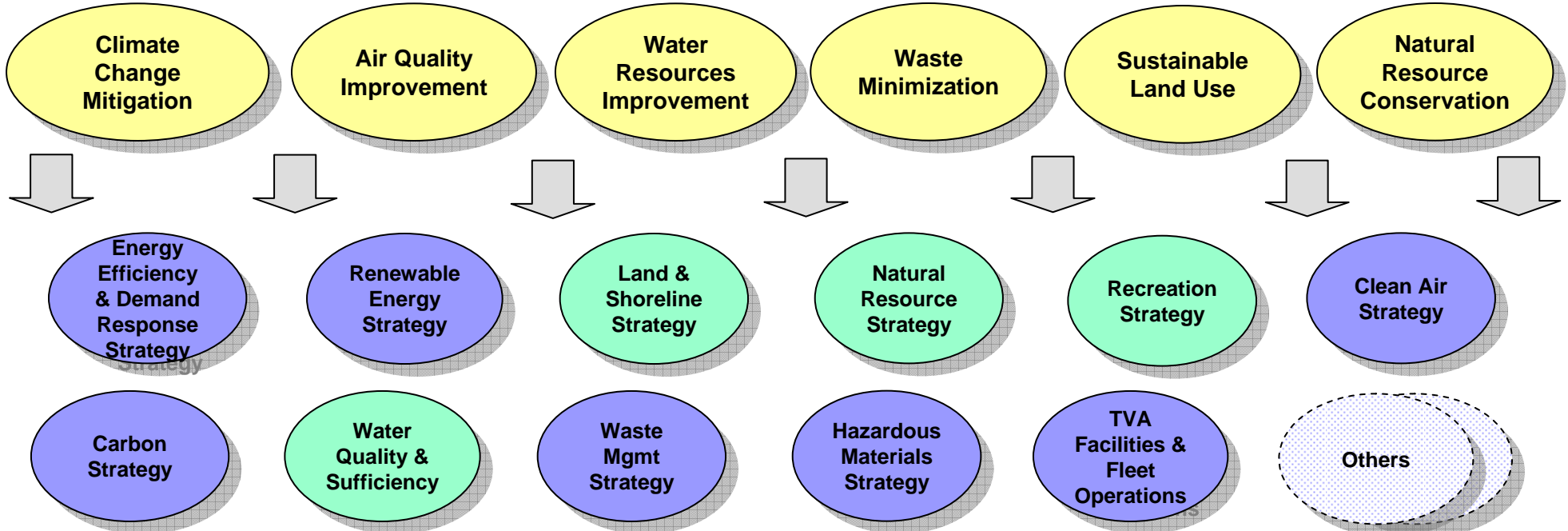
TVA 2007 Strategic Plan

Environmental Strategy Objective Summary:











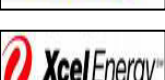
Support TVA's long-term success by managing environmental risk and impacts, increasing business and public value of environmental management, and enhancing TVA's reputation.

TVA Environmental Policy & Framework

Environmental Dimensions



Focus of Our Competitors & Peers

		<div> <div>Specific focus</div> <div>Limited focus</div> <div>Not covered</div> </div>			
Company	Source document	Land use	Waste mgmt	Water quality	Eco-diversity
Competition	 Corporate responsibility report 2006				
	 Corporate responsibility report 2006; climate change summary				
	 Sustainability report 2006-07				
	 Sustainability report 2006				
	 Corporate responsibility report 2007; environmental excellence report 2004				
Peers	 Corporate responsibility report 2006				
	 Bonneville Power Association's strategic direction 2008-2014				
	 Environment policy framework 2006				
	 Corporate responsibility report 2007; environmental report 2006				
	 Progress report 2006				
	 Triple bottom-line report 2006				

Environmental Policy & Framework – Table of Contents

Table of contents – draft version

- i. Message from the Board (optional)
- ii. Message from the Chief Executive Officer
- iii. Message from the Environmental Executive
- iv. This report in context
- v. About this report

- 1. Environment policy framework
 - 1.1. Cleaner, Affordable, Reliable Energy
 - 1.2. Sustainable Economic Development
 - 1.3. Proactive Environmental Stewardship
- 2. Stakeholder involvement
- 3. Challenges, actions and policies
 - 3.1. Climate change mitigation
 - 3.2. Air quality improvement
 - 3.3. Water resources improvement
 - 3.4. Waste minimization
 - 3.5. Sustainable land use
 - 3.6. Natural resource conservation
- 4. Communication and commitment
- 5. Conclusion

Proposed structure of policy sections – draft version

- ◆ Policy statement
 - ◆ Scope
 - ◆ Key issues
 - ◆ Current status
 - ◆ Goals and aspirations
 - ◆ Appendix (for internal use)
 - Implementation/process considerations
 - Supporting analyses
-
- ◆ “Our policy is...”
 - ◆ “TVA policy deals with...”
 - ◆ “TVA recognizes...”
 - ◆ “We have implemented/ currently pursue...”
 - ◆ “TVA aspires to...”



Land Policy

Background:

TVA originally acquired approximately 1.3 million acres of land in the Tennessee Valley. The reservoir system inundates approximately 470,000 acres with water. TVA has already transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently manages the remaining 293,000 acres of reservoir land pursuant to the *TVA Act*. Additionally, TVA manages 159,000 acres of coal/mineral rights, 258,000 acres of transmission lines rights-of-way, and 293,000 acres of flowage easement rights.

Key Components of the Land Policy are:

- ◆ TVA shall continue to develop reservoir land management plans for its reservoir properties, with substantial public input and with approval of the TVA Board of Directors.
- ◆ No residential or retail development on TVA-managed public lands.
- ◆ For industrial development, TVA has a preference for businesses that require water access, but will also consider other businesses.
- ◆ TVA will consider leasing or granting easements for commercial recreation or public recreation purposes if the property is allocated for that use in a reservoir land management plan.
- ◆ For lands that have been transferred to other entities, TVA will consider the removal or modification of deed restrictions that would open the land to recreational access or, in the case of land already open to the public, continue such access.

Future State:

The Office of Environment and Research (OE&R) has developed implementation guidance for implementing the Land Policy. OE&R will continue to follow this implementation strategy. In addition, land use decisions will be based on TVA's environmental strategy which is anticipated to incorporate TVA's Natural Resource Management and Recreation strategies and the Shoreline Management Policy.

Shoreline Management Policy

Background:

TVA manages approximately 11,000 miles of shoreline surrounding TVA's reservoirs. Section 26a of the *TVA Act* gives TVA permitting jurisdiction over proposed construction in and along the Tennessee River and its tributaries. Under Section 26a, TVA considers obstructions affecting navigation, flood control, and TVA public land. In 1999, the TVA Board of Directors adopted TVA's Shoreline Management Policy. Following adoption of the Shoreline Management Policy, regulations implementing the decisions were developed and approved by the TVA Board and codified as federal regulations at 18 C.F.R. 1304 on September 8, 2003. TVA processes approximately 2,600 permits annually.

Key Components of the Shoreline Management Policy are:

- ◆ Defines areas of TVA land that are open for residential shoreline access and establishes that 38 percent of the 11,000 miles of shoreline Valley-wide are open for residential access.
- ◆ Sets standards for docks, shoreline buffers, and other shoreline uses.
- ◆ In newly developed residential areas, establishes shoreline management zones with access/view corridors.
- ◆ Adopts a strategy for maintaining and gaining public shoreline.
- ◆ Permits for existing facilities remain in effect.

Future State:

OE&R has developed implementation guidance for implementing the Shoreline Management Policy. OE&R will continue to follow this implementation strategy.

Water Resources Strategy

Background:

TVA's water quality improvement activities seek to maintain suitable surface water and groundwater quality for municipal, industrial, and agricultural water supply; propagation of fish and wildlife; aesthetic enjoyment; water contact recreation; and future development of streams and reservoirs in the public interest.

Current State:

Currently, TVA implements the following water quality improvement programs: the Valley-wide Monitoring Program, the Targeted Watershed Initiative Program, the Tennessee Valley Clean Marina Initiative, the Tennessee Growth Readiness Program, and the Strategic Partnership Initiative.

TVA's future plans include:

- ◆ Continue to protect and improve stream and reservoir health by implementing the Valley-wide Monitoring Program, Targeted Watershed Initiative Program, Tennessee Valley Clean Marina Initiative, Tennessee Growth Readiness Program and Strategic Partnership Initiative.
- ◆ Evaluate and expand the process to create efficiencies.
- ◆ Continue to revise indicators that are benchmarkable and drive appropriate behavior.
- ◆ Strengthen partnerships to leverage additional resources for our Valley-wide efforts.
- ◆ Develop a communication plan so water quality improvement benefits can be communicated to TVA and the Valley stakeholders.

Current Direction in Area of Land & Water Stewardship

Potential Policy Statements – General

- Land and Water Stewardship Policy must be aligned with statutes in TVA's mission and the TVA Strategic Plan.
- TVA will be "Proactive in Environmental Stewardship."
- TVA will reinforce state messages on conservation.
- Education and Outreach will provide stakeholders and Valley residents with the:
 - Rationale behind current land and water policies (for example, Land Policy).
 - Explanation of TVA's role in these policy areas.
- TVA will communicate with state governors and their staffs on TVA issues and need for future legislations/regulations.
- Environmental decisions will be based on qualitative environmental criteria, including cost.
- Economic development activities will support the reduction of the Valley's environmental footprint.
- TVA will partner with other federal agencies to develop plans and execute projects that support TVA's environmental policies.
- TVA will continue to obtain and value stakeholder feedback, as appropriate, in carrying out its stewardship responsibilities.

Potential Policy Statements – Water

- TVA will take an unbiased and nonpolitical defining role in areas of water quantity for which no regulation currently exists.
- Education and outreach will provide stakeholders and Valley residents with the:
 - Rationale behind current water policies.
 - Information about the finite nature of water as a Valley resource.
 - Potential impact of out-of-basin transfers for upstream and downstream users. *(Note: Need to be careful in permitting long-term withdrawals, based on past hydrology.)*
- Planning related to the water quality and quantity will take into consideration the finite supply of water. *(Note: In some cases, current planning may assume infinite water availability. This may no longer be the case – planning assumptions have to be modified to reflect this new reality.)*
- TVA will demonstrate efficient use of water in all operational areas *(TVA is a large user, but small consumer)*.
- Develop an integrated water quality and quantity issues management program that fosters better collaboration and coordination with both internal and external stakeholders.

Potential Policy Statements - Land

- Education and outreach will provide stakeholders and Valley residents with the:
 - Rationale behind current land policies.
 - Information about the finite land resources in the Valley.
- All environmental stewardship strategies will aligned with the TVA Strategic Plan and the Environmental Policy (e.g., Natural Resource Management Strategy, Land Management Plans, Recreation Strategy, etc.).
- TVA environmental policy framework will be used to manage and prioritize recreation demand, shoreline development, habitat, ecology, heritage, and cultural requirements.
- TVA will manage eco-friendly recreation to meet increasing public demand for recreation and to encourage healthier outdoor lifestyles.
- Partner with other federal agencies to develop plans and execute projects that support stewardship activities for public benefit.

SWOT – Strengths, Weaknesses, Opportunities, & Threats

SWOT Analysis, is a strategic planning tool used to evaluate the **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats involved in a project. It involves specifying the objective of the project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective.

Comments _____

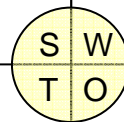
Strengths

Weaknesses

Comments _____

Threats

Opportunities



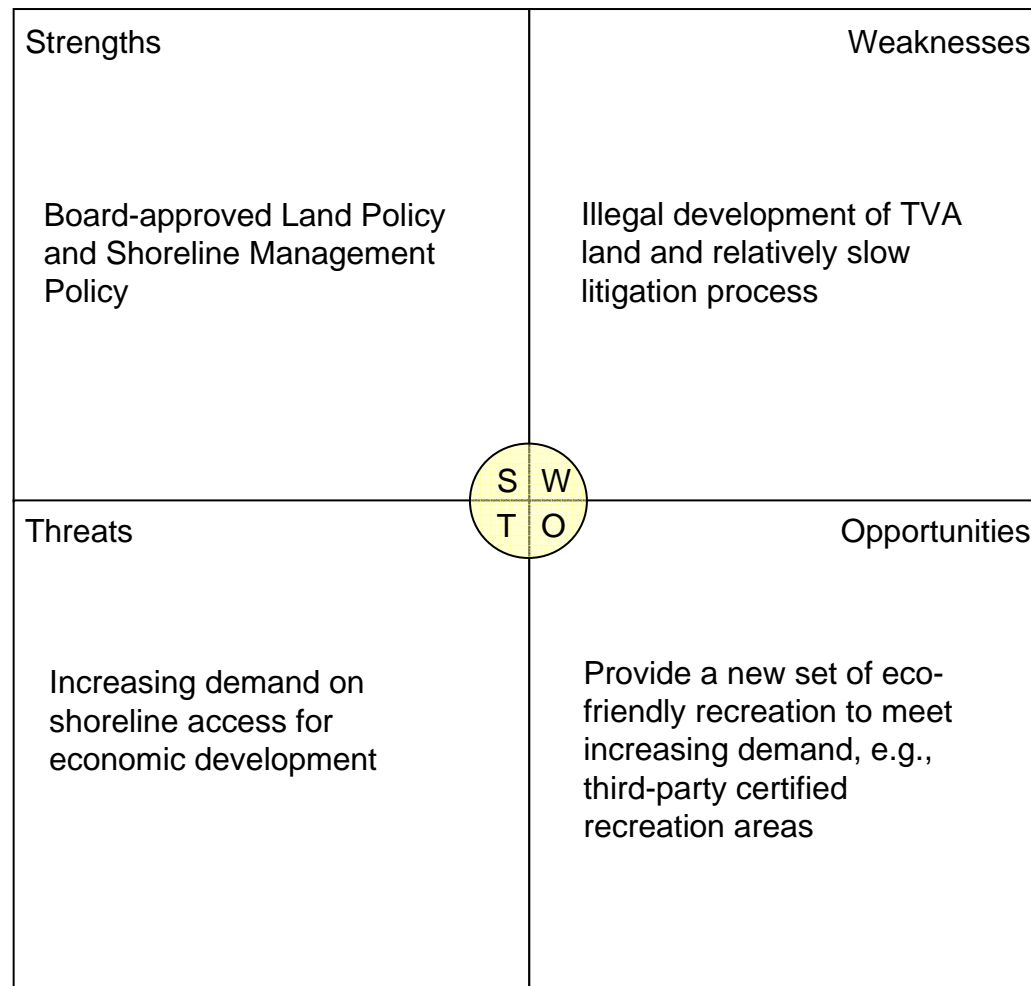
SWOTs for Focus Areas & An Example

We will be working on the SWOTS for two key focus areas:

- Land use and natural resources
- Water quality and sufficiency

Example - Land Use & Natural Resources

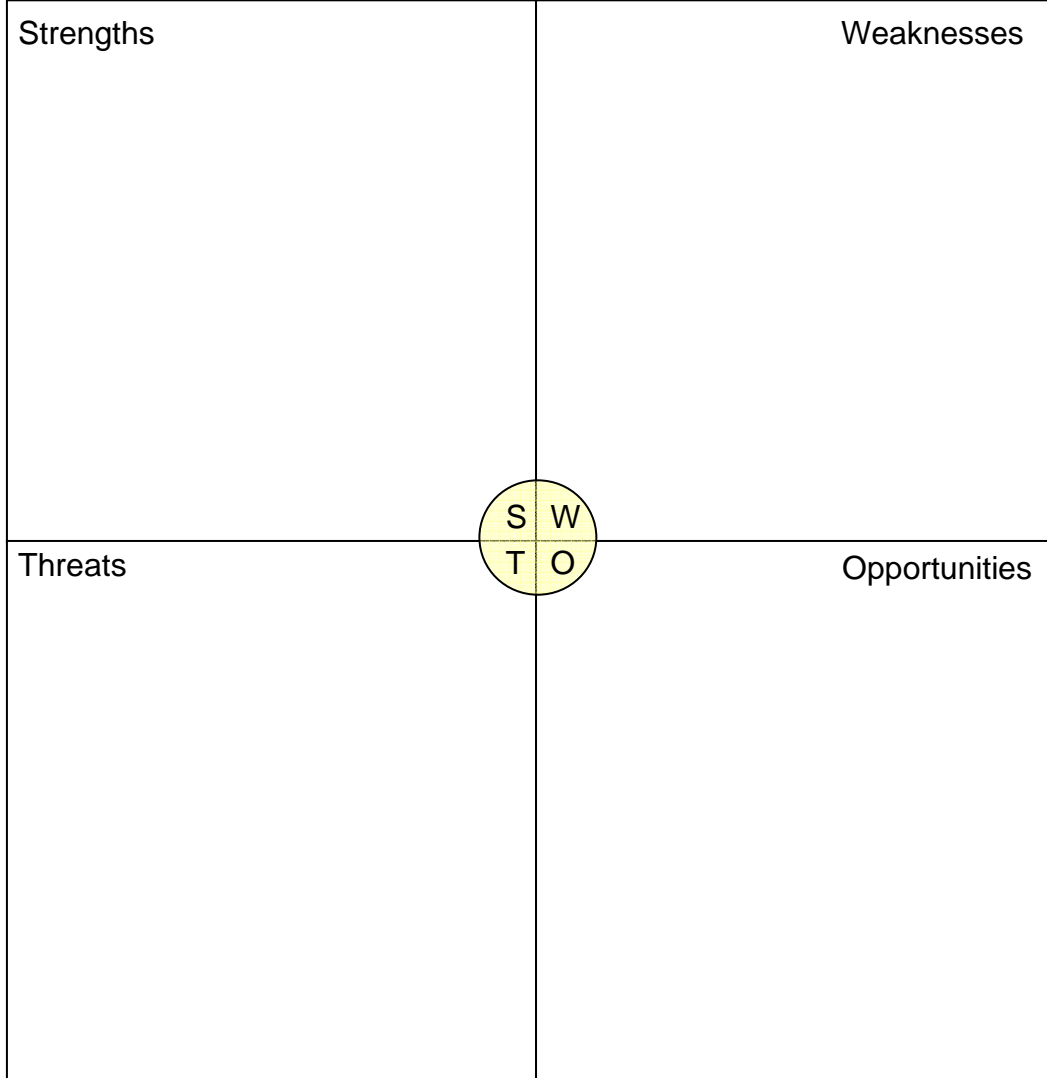
Comments



Comments

SWOT

Comments



Comments

Questions

For RRSC

How would you like TVA's land and water assets used in the context of –

◆ **Renewables**

On TVA-managed lands -

- ◆ Should we grow switchgrass or other bio-crops?

◆ **Climate Change/Carbon Abatement**

- ◆ Forestation – Use TVA land as carbon sinks by growing certain trees that have a higher absorption rate.
- ◆ What are the other areas where these resources can help carbon abatement?

General Questions –

- ◆ From a land and water stewardship perspective, what are the specific focus areas that need to be covered in TVA's overarching environmental policy?
- ◆ For each focus area just identified, what are the key issues that should be addressed, and what relative emphasis should they receive in the policy?